

REMARKS

This Amendment responds to the Office Action dated April 1, 2009 in which the Examiner rejected claims 1-3, 7, 11-13, 17, 21-23, 27, 31-33, 37, 41-43 and 47 under 35 U.S.C. § 102 (e) and rejected claims 4-6, 8-10, 14-16, 18-20, 24-26, 28-30, 34-36, 38-40, 44-46 and 48-50 under 35 U.S.C. § 103.

As indicated above, claims 1, 2, 8, 10-12, 18, 20-21, 31 and 41 have been amended in order to make explicit what is implicit in the claims. The amendment is unrelated to a statutory requirement for patentability.

Claims 1-2, 8, 10, 21 and 31 claim a multiplexing apparatus and claims 11-12, 18, 20 and 41 claim a multiplexing method. The multiplexing apparatus and method multiplex audio and video data using multiplexing instructions stored in a memory. The claimed invention thus provides a multiplexing apparatus and method which reduces the processing burden on a CPU since the CPU does not have to transfer an instruction directly to a multiplexor at the time of transfer, but instead, the multiplex stream is generated by reading the multiplexing instruction data. The prior art does not show, teach or suggest the invention as claimed in claims 1-2, 8, 10-12, 18, 20-21, 31 and 41.

Claims 1-3, 7, 11-13, 17, 21-23, 27, 31-33, 37, 41-43 and 47 were rejected under 35 U.S.C. § 102 (e) as being anticipated by *Robinett, et al.* (U.S. Publication No. 2002/0126711).

Robinett, et al. is directed to a remultiplexer which selectively modifies the content of a transport stream such as adding transport packets to a transport stream, deleting transport packets from the transport stream, rearranging the ordering of the transport packets in the transport stream and/or modifying the data contained in the transport packets [0025].

Thus, *Robinett, et al.* is directed to a remultiplexing apparatus which remultiplexes a transport stream. However, the claimed invention, as claimed in claims 1-2, 11-12, 21, 31 and 41, is directed to generating the transport stream and in particular, multiplexing video data from a video source and audio data from an audio source into a multiplexed stream. However, *Robinett, et al.* is directed to a remultiplexer and not a multiplexing apparatus.

Additionally, since *Robinett, et al.* is directed to a remultiplexer, the transport stream in *Robinett, et al.* contains descriptor data containing a time stamp indicating when the transport packet is received at an input port or a dispatch time stamp indicating the time at which a transport packet is to be transmitted from an output port [0037] [0074].

Thus, nothing in *Robinett, et al.* shows, teaches or suggests (a) calculating an order of multiplexing video and audio data units based on storage location, (b) generating a plurality of multiplexing instruction data which describe storage location and order of multiplexing each data unit and (c) storing the calculated multiplexing instruction as claimed in claims 1-2, 11-12, 21, 31 and 41. Rather, *Robinett, et al.* only discloses a time stamp indicating the time received or the time to transmit from an output port of the transport stream.

Since *Robinett, et al.* is directed to a remultiplexer and does not show, teach or suggest (a) multiplexing video data from a video source and audio data from an audio source based on calculating the order of multiplexing based on storage location, (b) generating a plurality of multiplexing instruction data which describe storage location and order of multiplexing each data unit and (c) storing the calculated multiplexing instruction as claimed in claims 1-2, 11-12, 21, 31 and 41, Applicant respectfully request the Examiner withdraws the rejection to claims 1-2, 11-12, 21, 31 and 41 under 35 U.S.C. § 102 (e).

Claims 3, 7, 13, 17, 22-23, 27, 32-33, 37, 42-43 and 47 recite additional features.

Applicant respectfully submits that claims 3, 7, 13, 17, 22-23, 27, 32-33, 37, 42-43 and 47 would not have been anticipated by *Robinett, et al.* within the meaning of 35 U.S.C. § 102 (e) at least for the reasons as set forth above. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claims 3, 7, 13, 17, 22-23, 27, 32-33, 37, 42-43 and 47 under 35 U.S.C. § 102 (e).

Claims 8-9, 18-19, 28-29, 38-39 and 48-49 were rejected under 35 U.S.C. § 103 as being unpatentable over *Robinett, et al.* and further in view of *Dobson, et al.* (U.S. Patent No. 6,188,703).

As discussed above, *Robinett, et al.* is only directed to a remultiplexer of a transport stream. Nothing in *Robinett, et al.* shows, teaches or suggests multiplexing video data from a video source and audio data from an audio source as claimed in claims 8 and 18. Rather, *Robinett, et al.* is directed to remultiplexing a transport stream.

Furthermore, as discussed above, *Robinett, et al.* is only directed to storing a time stamp when a transport packet is received. Nothing in *Robinett, et al.* shows, teaches or suggests (a) calculating an order of multiplexing data units based on storage location (b) generating a plurality of multiplexing instruction data which describe storage location and order of multiplexing and (c) storing the calculated multiplexing instruction as claimed in claims 8 and 18. Rather, *Robinett, et al.* only discloses storing a time stamp.

Dobson, et al. appears to disclose a FIFO buffer 32 which signals a MUX microprocessor 22 when sufficient video data is in a buffer 32 (column 3, line 65-column 4, line 3). Nothing in *Dobson, et al.* shows, teaches or suggests (a) calculating an order of multiplexing based on storage location, (b) generating multiplexing instruction data which describe the storage location,

and order of multiplexing and (c) storing the generated multiplexing instruction data as claimed in claims 8 and 18. Rather, *Dobson, et al.* only discloses signaling when a buffer contains sufficient video data.

Furthermore, *Dobson, et al.* merely discloses that a processor 22 is alerted when there is a video start-code in a transport packet payload that is about to be read (column 4, lines 11-13). Nothing in *Dobson, et al.* shows, teaches or suggests calculating an order of multiplexing based on storage location and generating multiplexing instruction data which describes the storage location and order of multiplexing as claimed in claims 8 and 18. Rather, *Dobson, et al.* only discloses alerting a processor when a start code is about to be read.

A combination of *Robinett, et al.* and *Dobson, et al.* would not be possible since *Robinett, et al.* is directed to remultiplexing while *Dobson, et al.* is directed to a multiplexer. Even assuming arguendo that *Robinett, et al.* and *Dobson, et al.* could be combined, the combination would merely suggest that once the data is multiplexed into a data stream as taught by *Dobson, et al.* to remultiplex it as taught by *Robinett, et al.* Thus, nothing in the combination of the references shows, teaches or suggests (a) calculating an order of multiplexing based on storage location, (b) generating multiplexing instruction data which describes both the storage location and order of multiplexing and (c) storing the generated multiplexing instruction data as claimed in claims 8 and 18. Therefore, Applicant respectfully request the Examiner withdraws the rejection to claims 8 and 18 under 35 U.S.C. § 103.

Claims 9, 19, 28-29, 38-39 and 48-49 recite additional features. Applicant respectfully submits that claims 9, 19, 28-29, 38-39 and 48-49 would not have been obvious within the meaning of 35 U.S.C. § 103 over *Robinett, et al.* and *Dobson, et al.* at least for the reasons as set

forth above. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claims 9, 19, 28-29, 38-39 and 48-49 under 35 U.S.C. § 103.

Claims 10, 20, 30, 40 and 50 were rejected under 35 U.S.C. § 103 as being unpatentable over *Robinett, et al.* in view of *Zaun, et al.* (U.S. Publication No. 2001/0024456).

As discussed above, *Robinett, et al.* is directed to remultiplexing apparatus. Nothing in *Robinett, et al.* shows, teaches or suggests multiplexing audio data from an audio source and video data from a video source as claimed in claims 10 and 20. Furthermore, *Robinett, et al.* only discloses storing a time stamp. Nothing in *Robinett, et al.* shows, teaches or suggests (a) calculating an order of multiplexing based on storage location, (b) generating multiplexing instructions describing storage location and order of multiplexing and (c) storing the multiplexing instruction data as claimed in claims 10 and 20. Rather, *Robinett, et al.* is merely directed to remultiplexing a transport stream.

Zaun, et al. appears to disclose a remultiplexing module including an output processor 124 which generates two or more output streams from data stored in packet buffers 104. The output processing section then generates two or more independent high-speed transport multiplex output streams incorporating the selected packet data [0035].

Thus, *Zaun, et al.* merely discloses outputting two or more remultiplexed streams. Nothing in *Zaun, et al.* shows, teaches or suggests multiplexing video data from a video source and audio data from an audio source as claimed in claims 10 and 20. Furthermore, nothing in *Zaun, et al.* shows, teaches or suggests (a) calculating an order of multiplexing based on storage location, (b) generating multiplexing instruction data which describe the storage location and order of multiplexing and (c) storing the multiplexing instruction data as claimed in claims 10

and 20. Rather, *Zaun, et al.* is only directed to remultiplexing and outputting two or more streams.

The combination of *Robinett, et al.* and *Zaun, et al.* would merely suggest to obtain time stamp information for a transport stream as taught by *Robinett, et al.* and to generate two or more output streams as taught by *Zaun, et al.* Thus, nothing in the combination of the references shows, teaches or suggests (a) multiplexing video data from a video source and audio data from an audio source, (b) calculating an order of multiplexing based on storage location, (c) generating multiplexing instruction data which describe the storage location and order of multiplexing and (d) storing the multiplexing instruction data as claimed in claims 10 and 20. Therefore, Applicant respectfully request the Examiner withdraws the rejection to claims 10 and 20 under 35 U.S.C. § 103.

Claims 30, 40 and 50 recite additional features. Applicant respectfully submits that claims 30, 40 and 50 would not have been obvious within the meaning of 35 U.S.C. § 103 over *Robinett, et al.* and *Zaun, et al.* at least for the reasons as set forth above. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claims 30, 40 and 50 under 35 U.S.C. § 103.

Claims 4-6, 14-16, 24-26, 34-36 and 44-46 were rejected under 35 U.S.C. § 103 as being unpatentable over *Robinett, et al.* in view of *Kelly, et al.* (U.S. Publication No. 2001/0036355).

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. § 103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicant respectfully requests the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, since nothing in *Robinett, et al.* shows, teaches or suggests the primary features as claimed in claims 1, 12, 21, 31 and 41 as discussed above, Applicant respectfully submits that the combination of the primary reference with the secondary reference to *Kelly, et al.* would not overcome the deficiencies of the primary reference. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claims 4-6, 14-16, 24-26, 34-36 and 44-46 under 35 U.S.C. § 103.

Thus, it now appears that the application is in condition for a reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

CONCLUSION

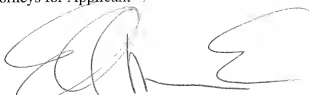
If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is requested to contact, by telephone, the Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicant respectfully petitions for an appropriate extension of time. The fees for such extension of time may be charged to Deposit Account No. 50-0320.

In the event that any additional fees are due with this paper, please charge to our Deposit Account No. 50-0320.

Respectfully submitted,

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